

KENWOOD

AUDIO/VIDEO STEREO RECEIVER

**KR-V7010**

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## INSTRUCTION MANUAL

KENWOOD CORPORATION

# Introduction

Your choice of this product indicates that you are a devotee of excellence in sound reproduction. We appreciate your patronage and take pride in the long tradition of quality components that our company represents.

So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with the operating features and system-connection considerations, so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability, we have sought to anticipate your needs and desires.

**Keep this manual handy for future reference.**

## For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model \_\_\_\_\_ Serial Number \_\_\_\_\_

## Unpacking

Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.

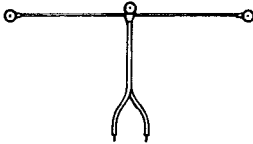
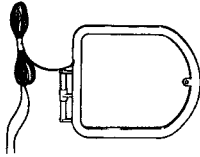
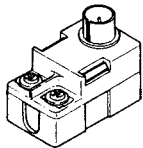


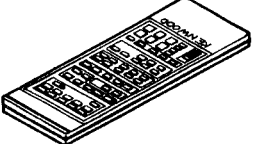

Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

## Note to CATV system installer:

This reminder is provided to call to the CATV system installer's attention to Article 820-22 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

## Accessories

FM indoor antenna ..... 1	AM loop antenna ..... 1
	
75 ohm/300 ohm antenna adaptor ..... 1	Loop antenna holder .... 1
	
Batteries ("AA" or "R6") ..... 2	Remote control unit ..... 1
	
System control cord (For Europe.) ..... 3	
	

## Contents

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## Before applying power

### For the U.S.A. and Canada

#### Important!

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only.

#### Safety precaution for a Polarized AC plug

**CAUTION:** TO PREVENT ELECTRIC SHOCK DO NOT USE THIS (POLARIZED) PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

### For the United Kingdom

#### Important!

Units shipped to the U.K. are designed for operation on 240 volts AC only.

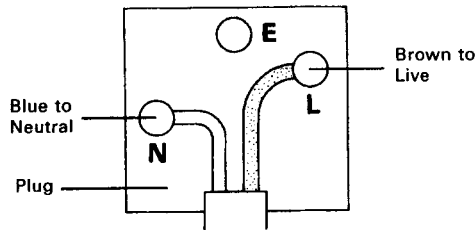
The mains plug must be removed from the wall socket prior to any internal examination.

The wires in this mains lead are coloured in accordance with the following code:

Blue ..... Neutral  
Brown ..... Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

Wire colour	Plug terminal marking
Blue .....	N or Black
Brown .....	L or Red



#### Notes:

1. If a 13-amp plug is used, this must be fitted with a 5- amp fuse.
2. If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

### For Australia and Europe

#### Important!

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 220 V AC only.

### For other countries

#### Important!

Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

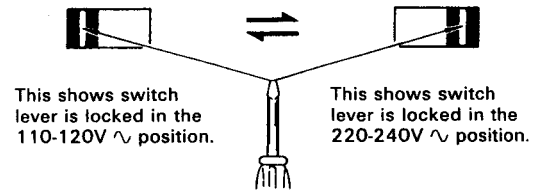
#### AC voltage selection

This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following directions.

#### Note:

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

AC 110-120V ~ ⬅ AC 220-240V ~ AC 110-120V ~ ⬅ AC 220-240V ~







Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

#### AC voltage selector switch

## Safety precautions

**WARNING:** TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.

 <div data-bbox="321 1653 564 1736" style="border: 1px solid black; padding: 5px; text-align: center;"> <b>CAUTION</b>              RISK OF ELECTRIC SHOCK              DO NOT OPEN         </div> 	<p>CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.</p>
	<p>THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.</p>
	<p>THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.</p>

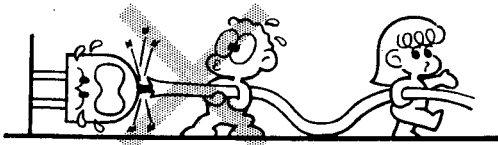
## IMPORTANT SAFEGUARDS

Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

**1. Power sources** – The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

**2. Power-cord protection** – Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Never pull or stretch the cord.

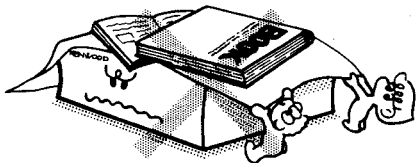


**3. Grounding or polarization** – The precautions should be taken so that the grounding or polarization means of this unit is not defeated.

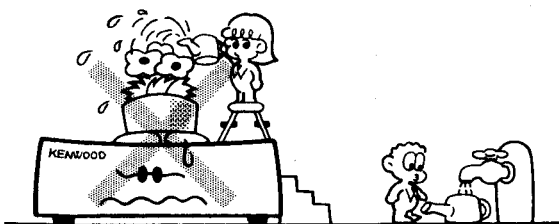
**4. Ventilation** – The unit should be situated so that its location or position does not interfere with its proper ventilation.

To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls.

Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.

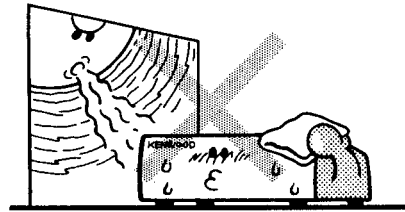


**5. Water and moisture** – The unit should not be used near water - for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.

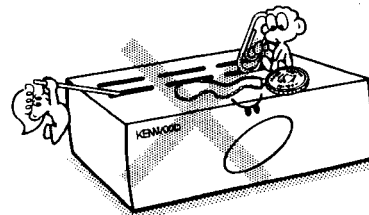


**6. Temperature** – The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

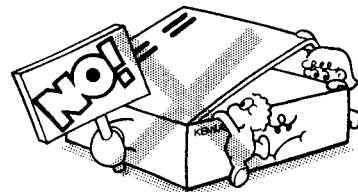
**7. Heat** – The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



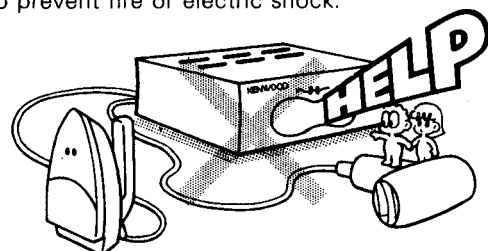
**8. Electric shock** – Care should be taken so that object do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



**9. Enclosure removal** – Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



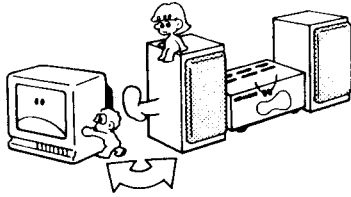
**10. AC outlets** – Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.



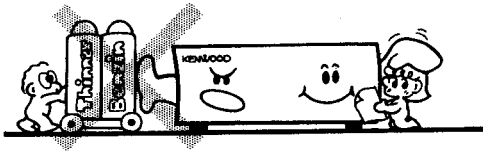
The maximum capacities indicated for the AC outlets on the rear panel of this unit are as follows.

SWITCHED outlet : 100 W (For Europe).  
: 200 W (Others).

- 11. Magnetic fields** – Keep the units away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.



- 12. Cleaning** – Do not use volatile solvents such as alcohol, paint thinner, gasoline, benzene, etc. to clean the cabinet. Use a clean dry cloth.



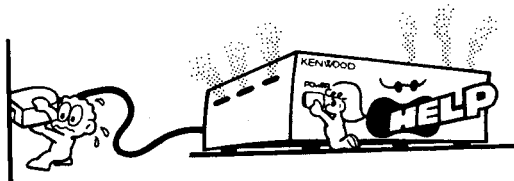
- 13. Carts and stands** – An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



- 14. Nonuse periods** – The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

- 15. Abnormal smell** – If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.

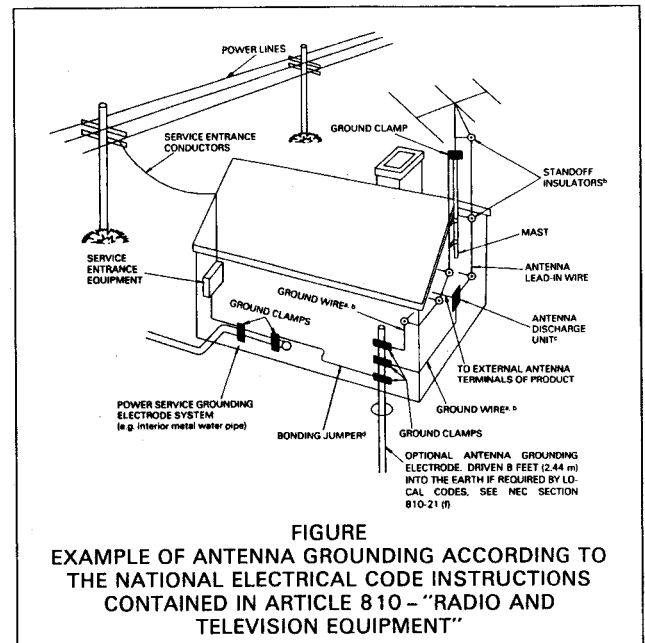
## POWER OFF!



- 16. Damage requiring service** – The unit should be serviced by qualified service personnel when:
- A.** The power-supply cord or the plug has been damaged; or
  - B.** Objects have fallen, or liquid has been spilled into the unit; or
  - C.** The unit has been exposed to rain; or
  - D.** The unit does not appear to operate normally or exhibits a marked change in performance; or
  - E.** The unit has been dropped, or the enclosure damaged.

- 17. Servicing** – The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

- 18. Outdoor antenna grounding** – If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/NFPA No. 70 – 1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.



- <sup>a</sup> Use No.10 AWG (5.3 mm<sup>2</sup>) copper, No.8 AWG (8.4 mm<sup>2</sup>) aluminum, No.17 AWG (1.0 mm<sup>2</sup>) copper-clad steel or bronze wire, or larger, as a ground wire.
- <sup>b</sup> Secure antenna lead-in and ground wires to house with stand-off insulators spaced from 4 – 6 feet (1.22 – 1.83 m) apart.
- <sup>c</sup> Mount antenna discharge unit as close as possible to where lead-in enters house.
- <sup>d</sup> Use jumper wire not smaller than No.6 AWG (13.3 mm<sup>2</sup>) copper, or the equivalent, when a separate antenna-grounding electrode is used. See NEC Section 810-21(j).

- 19. Power lines** – An outdoor antenna should be located away from power lines.

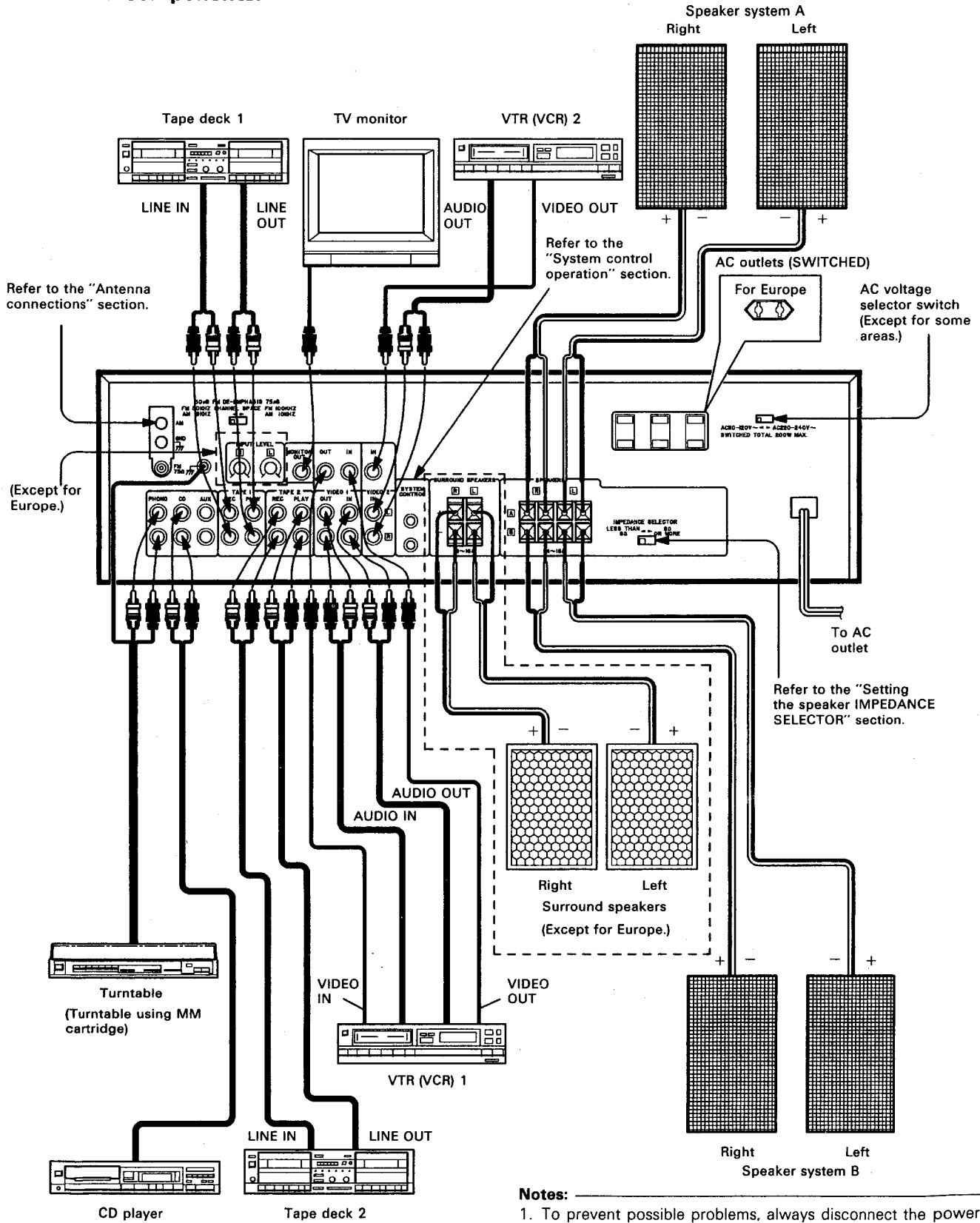
### Notes:

1. Item 3 is not required except for grounded or polarized equipment.
2. Item 10 is not required except for units provided with AC outlets.
3. Item 18 and 19 are not required except for units provided with antenna terminals.
4. Item 18 complies with UL-1270 in the U.S.A.

## System connections

**Make connections as shown in the diagram below.**

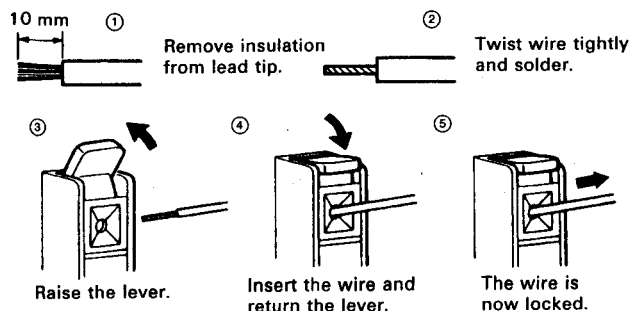
**When connecting the related system components, refer also to the instruction manuals of the related components.**



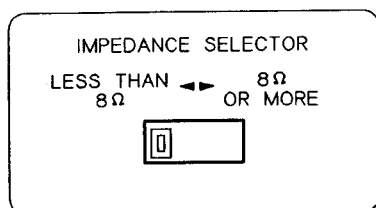
**Notes:**

1. To prevent possible problems, always disconnect the power plug or turn off the POWER switch of the receiver before connecting or disconnecting the audio cables.
2. When connecting audio cables, always insert the pin plugs securely into the connecting jacks.
  - Insufficient insertion may result in no-sound problems or generation of noise.

## Speaker connections



Speaker lead connection



### WARNING

Particular attention must be given to making good electrical contact at the receiver output and speaker terminals.

Poor or loose connections can cause sparking or burning at the terminals because of the very high power that the receiver can deliver. Follow these steps carefully.

### ■ Connecting the front speakers

Connect speakers rated at 4 ohm or more to the SPEAKERS terminals.

1. Connect the left speaker to the L speaker terminals on the rear of the receiver and the right speaker to the R terminals.
2. Connect each cable as shown in the illustration, taking care that the wires do not make contact with other terminals.

#### Notes:

1. Take care so as not to short the positive (+) and negative (–) speaker cords.
2. If the left and right speakers, or positive and negative cables, are connected the wrong way, the reproduced sound may be unclear, with ambiguous location of the musical instruments etc. To avoid this, pay attention to the left and right and positive and negative indications when connecting the speakers.

### ■ Setting the speaker IMPEDANCE SELECTOR

When connecting one pair of speakers to the SPEAKERS A or B terminals, set the IMPEDANCE SELECTOR according to the speaker impedance.

When two pairs of speakers are connected to both the A and B terminals, match the speaker impedance selector to the speakers with the lowest impedance.

#### Notes:

1. During speaker system connection and operation of the speaker IMPEDANCE SELECTOR, set the POWER switch to OFF.
2. Check that the connected lead wires of the speaker systems do not contact with other jacks or terminals.

### ■ SURROUND SPEAKER terminals (Except for Europe.)

Connect speakers having an impedance of between 8 ohms and 16 ohms, and place them to the left and right behind the listening position.

### ■ AC outlets

The AC outlets on the rear panel may be used to supply power to other components in the system, such as turntables, tape decks, etc. Never connect equipment whose power consumption exceeds the maximum value shown at each outlet. (In Europe, do not connect a main amplifier or similar component to any of the AC outlets.)

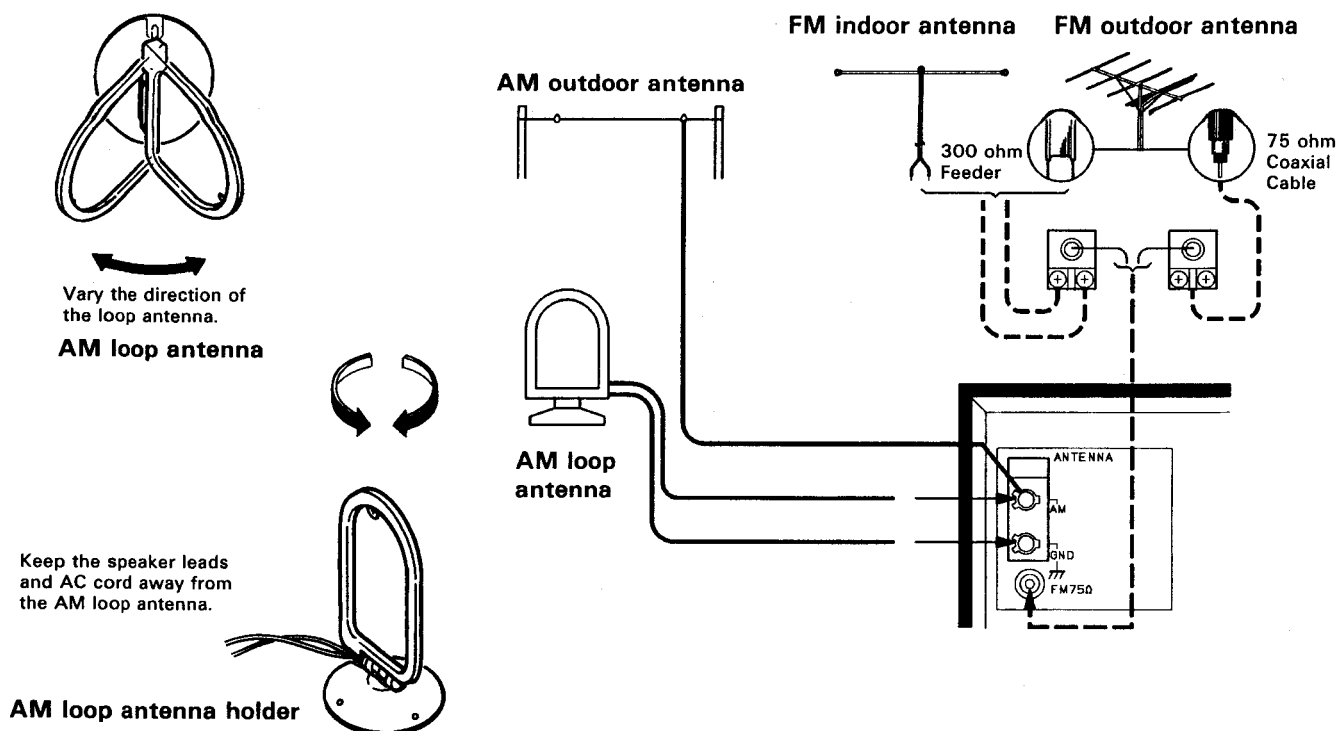
#### SWITCHED outlets:

These outlets supply power only when the unit is turned on. The maximum total capacity is 200 watts. (100 W in Europe.)

### ■ Ground

For maximum safety and minimum interference connect the GND terminal to a good earth ground if practicable. A good earth ground is a cold water pipe or a metal stake driven into moist earth. However, never use a gas pipe for this purpose.

## Antenna connections



### ■ AM antennas

#### AM loop antenna

Attach the AM loop antenna to the supplied loop antenna stand and place it on a shelf, etc., or install it on the rack or wall with screws.

Rotate the AM loop antenna to the right or left for best reception.

#### Note:

Do not place the AM loop antenna directly on the unit. As this unit employs computing devices, placing the AM loop antenna on the unit may result in noise generation. Place the AM loop antenna away from the unit.

#### AM outdoor antenna

In steel buildings or at a great distance from the transmitter, it may be necessary to install an outside long wire antenna.

The end of this wire should be stripped of insulation and connected to the AM terminal. At this time, keep the loop antenna connected.

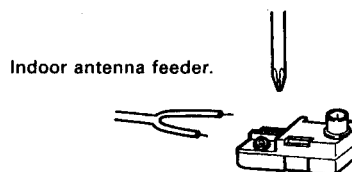
### ■ FM antennas

#### FM indoor antenna

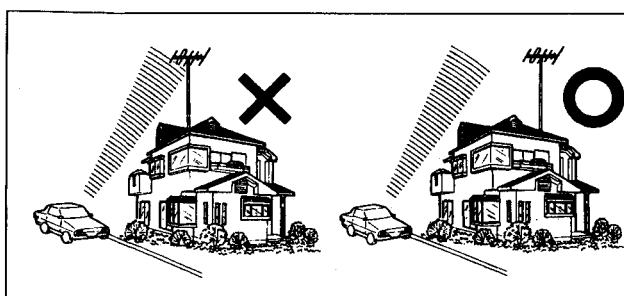
Connect the T-shaped indoor antenna (supplied) to the 75 ohm FM ANTENNA terminal with the 75 ohm/300 ohm antenna adaptor as shown in the Antenna connections diagram. Spread the two arms that form the top of the "T" horizontally and hold them against convenient wall surfaces.

Try several locations for best results with your favorite stations. Tape the antenna in place where the best compromise is found between listening results and appearance.

#### Connection of the 75 ohm/300 ohm antenna adaptor



Loosen the screws with a screwdriver. Insert the antenna terminals under the screw heads and tighten the screws firmly.



- To minimize auto-ignition noise, locate the antenna as far from heavy traffic as possible.
- Keep the feeder or coaxial cable as short as possible. Do not bundle or roll up excess cable.
- The antenna should be at least two meters (6.6 feet) from reinforced concrete walls or metal structures.

#### FM outdoor antenna setting



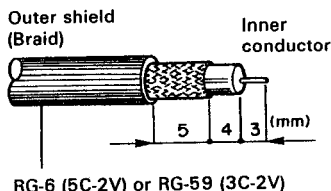
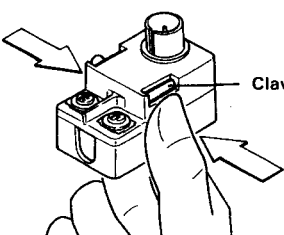
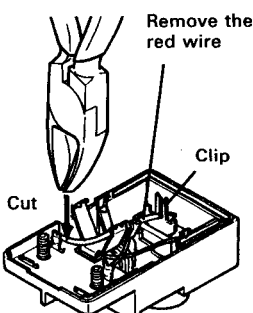
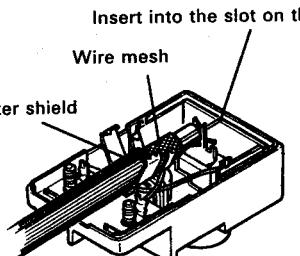
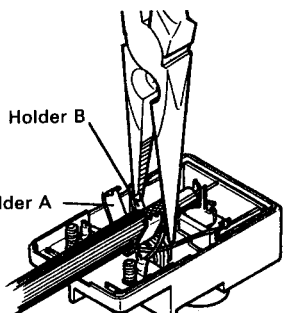
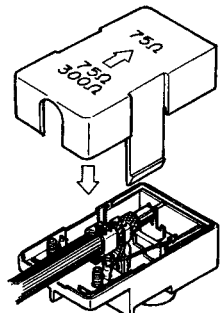
## FM outdoor antenna

Be sure to use an outdoor FM antenna to receive good sound quality FM broadcasts with a minimum of noise. When connecting an outdoor antenna to the antenna terminals of this unit, use a 75 ohm/300 ohm antenna adaptor connected to the coaxial cable as illustrated. The 75 ohm/300 ohm antenna adaptor is supplied with this unit. Be sure to connect the coaxial cable to the adaptor as instructed below.

### Note:

An FM outdoor antenna can be connected to the tuner with either a 75 ohm coaxial cable or a 300 ohm ribbon feeder. For proper connection, carefully read the instruction manual provided with outdoor antenna.

## ■ 75 ohm coaxial cable connection (Follow the order of numbers.)

<p>① Arrange the coaxial cable as illustrated.</p> 	<p>② Open the 75 ohm/300 ohm antenna adaptor</p> <p>Press the claws in the direction of the arrows with the fingers to release the lock and pull out the cover.</p> 	<p>③ Cut off the red wire and remove it from the clip.</p> 
<p>④ Connect the processed coaxial cable to 75 ohm/300 ohm antenna adaptor as shown below.</p> 	<p>⑤ Secure the holders A and B.</p> 	<p>⑥ Close the cover.</p> 

## ■ FM DE-EMPHASIS/CHANNEL SPACE switch (Except for some areas.)

The FM DE-EMPHASIS/CHANNEL SPACE switch on the rear panel is set to the correct setting that prevails in the area to which the unit is shipped. However, if the FM DE-EMPHASIS/CHANNEL SPACE setting is not matched to the area where the unit is to be used (for instance, if you move from area 1 to area 2 or vice versa), desired reception of AM/FM broadcasts cannot be expected. In this case, change the FM DE-EMPHASIS/CHANNEL SPACE setting in accordance with the area corresponding to the table on the right.

The FM DE-EMPHASIS setting is switched over at the same time.

### Note:

When changing the setting of the FM DE-EMPHASIS/CHANNEL SPACE switch, first disconnect the power cord, then reset the channel space switch, connect the power cord again, and turn the power on.

Area		Channel Space Frq.	FM DE-EMPHASIS
1.	U.S.A. Canada, Hawaii and Guam	FM: 100 kHz	75 $\mu$ s
		AM: 10 kHz	
2.	European countries and Far East countries	FM: 50 kHz	50 $\mu$ s
		AM: 9 kHz	

FM DE-EMPHASIS/CHANNEL SPACE table



# Controls and indicators

## POWER key

Switches the power ON/OFF.

## SPEAKERS A and B switches

Selects the speaker system to be used for listening.

### Note:

When the SPEAKERS A and B switches are both used at the same time, the speakers connected to the SPEAKERS A and B terminals are connected in series. Therefore, whenever using the SPEAKERS A and B switches at the same time, be sure that two pairs of speakers are connected to the A and B terminals, otherwise no sound is output.

## EQ. (Equalizer) PRESET (M-A ~ M-E) keys

Use these keys to store equalizer patterns in memory or to recall them.

## PHONES jack

This jack accepts the standard stereo headphone plug. When you wish to listen through headphones alone, set the SPEAKERS switches (A and B) both to the OFF (□) position.

## Equalizer level control keys

Adjust these keys up and down to equalize the sound level of the indicated frequencies with in a range of  $\pm 12$  dB.

## EQ/SPI key

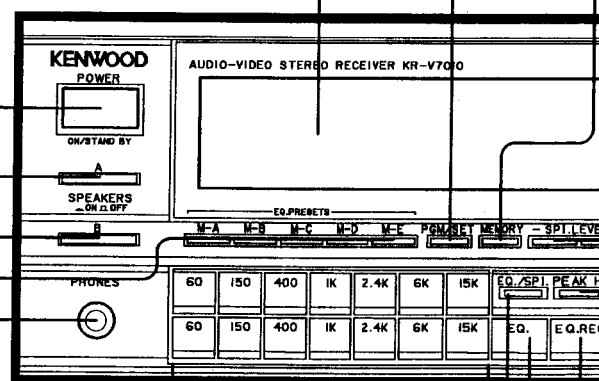
Pressing this key alternates the display mode between EQ (graphic equalizer) and SPI (spectrum peak indicator).

## Equalizer (EQ, ON) key

Press this switch to ON and the frequency characteristics of the sound will be modified by the graphic equalizer. In the DEFEAT position, the frequency characteristics remain unchanged.

## EQ REC key

Used when recording a source to a tape deck through the graphic equalizer.



### Equalizer preset mode key (PGM/SET)

Each time this key is pressed, the recall mode of the equalizer preset patterns alternates between PGM (user programmed patterns) and SET (factory preset patterns).

### Equalizer preset MEMORY key

This key is used to store an equalizer pattern the PGM PRESET memory.

### SPI. LEVEL control keys

These control keys are used to adjust the display level of the spectrum analyzer display.

### REAR VOLUME control keys (Except for Europe.)

Adjusts front/rear balancing when surround speakers are used. The control range is  $\pm 20$  dB of the front speaker level.

### MAIN VOLUME control keys

This control adjusts the left- and right-channel volume levels simultaneously. Set it for the desired listening level.

### MUTING key

When the muting key is pressed, the MUTING indicator in the display window will flash, and the overall listening sound level is reduced.

When the key is pressed again, the listening level is restored to same level as before.

### BALANCE control keys

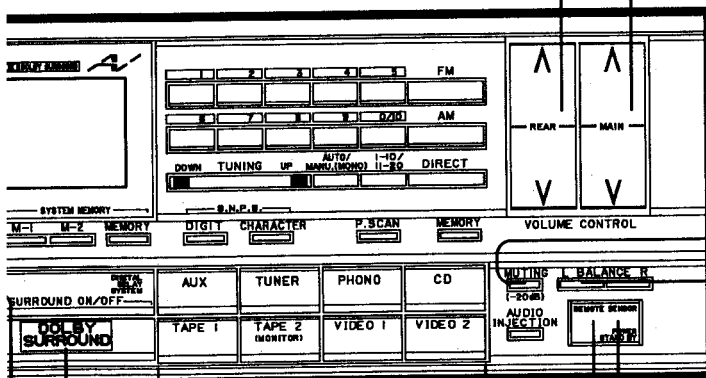
Adjust the left and right volume balance.

### REMOTE POWER STAND-BY indicator

This indicator lights if the power cord is plugged into the AC outlet. It is lit to show that the POWER switch on the front panel or the POWER key on the remote control unit can be activated.

### REMOTE SENSOR

Point the supplied remote control unit towards this sensor and operate.



**Input selector keys**  
Select the input source.

### DOLBY SURROUND key (Except for Europe.)

Press this key to activate or deactivate the surround output. DOLBY surround mode is automatically entered when this key is pressed.

### PEAK HOLD key

In the spectrum peak indicator (SPI) mode, pressing this key activates or deactivates the Peak Hold function of the spectrum peak indicator.

### DIGIT key

In the station name input mode, pressing this key advances the column after a character is selected with the Tuning UP/DOWN key. When this operation is repeated four times the station name input mode is automatically released.

### SYSTEM MEMORY channel keys (M-1/M-2)

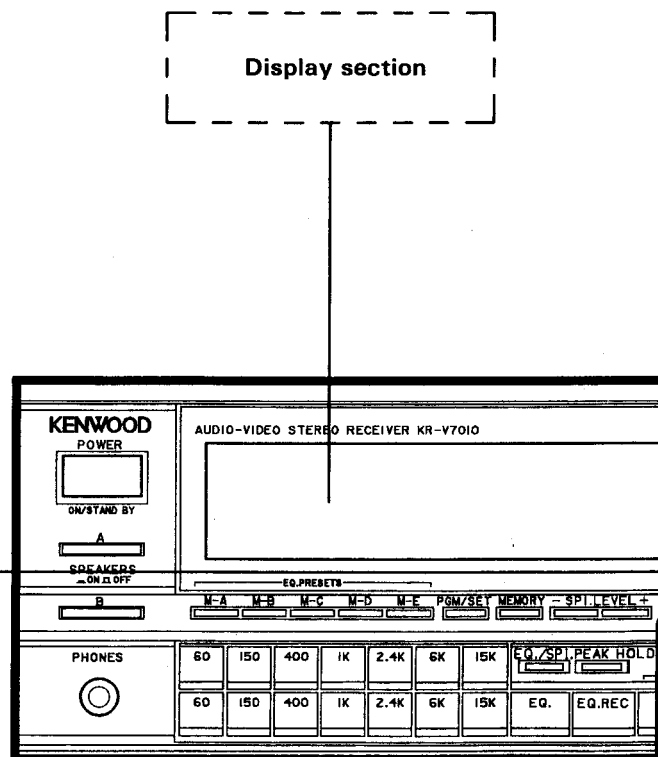
Two memory groups can be used with the System Memory feature.

### System MEMORY key

This key is used to store the current playing condition in memory.

### CHARACTER key

Press this key to activate the station name input mode.



### TUNING keys

Used to change the frequency. Pressing the UP side will advance to a higher frequency and pressing the DOWN side will move to a lower frequency. In the station name input mode, this key is used to select the characters.

### AUTO/MANU. (MONO) key

Press this key to select the tuning mode between AUTO or MANUAL. In MANUAL mode, FM stereo broadcasts are received in monaural.

### Numeric (1 ~ 0/10) keys

Use these keys to:

- 1) input directly the digits of frequencies, or
- 2) store and recall frequencies in the preset channels.

### Band selector (AM, FM) keys

Press to select the receiving band.

### Preset function (1-10/11-20) key

Used to select the 1-10 or 11-20 preset channel setting. In either FM or AM mode, 20 stations can be preset at random as each setting ("1-10" or "11-20") can contain 10 preset stations. Indicator "1-10" lights when the "1-10" setting is used, and indicator "11-20" lights when the "11-20" setting is used.

### DIRECT key

Used to tune to a station directly. Input the desired frequency with the numeric keys after pressing the DIRECT key.

### AUDIO INJECTION key

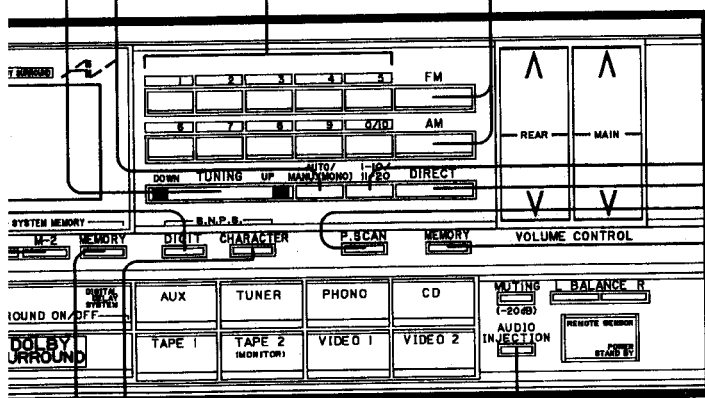
Press this key ON when it is necessary to replace the sound of VIDEO 2 with that of an AUDIO source during video dubbing.

### MEMORY key

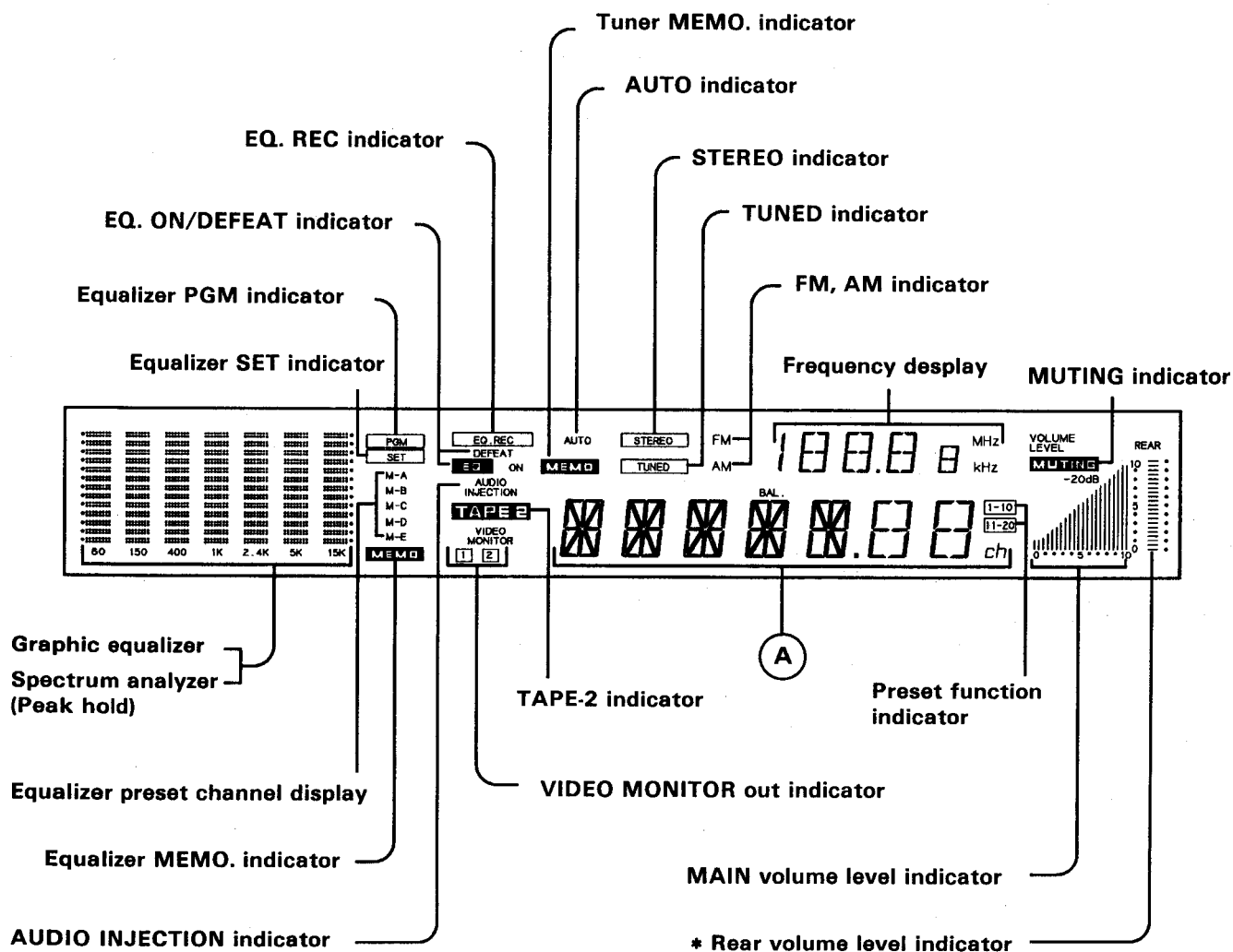
When this key is pressed, the MEMORY indicator lights and the unit stands by for entry of a preset station number.

### PRESET SCAN key

Use this key for preset channel scanning. When a frequency stored in the preset memory is being received, pressing this key shifts reception to the next frequency stored in the preset memory.



## Display section

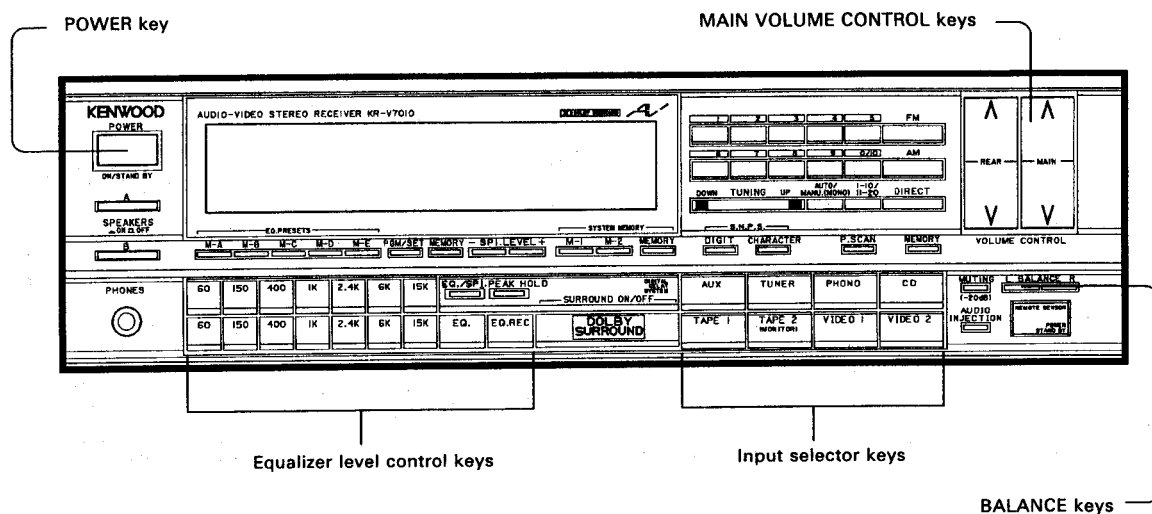


**A** Input/Preset channel/Station name/MAIN volume level/

\* Rear volume level/Balance/\* DOLBY surround/EQ preset channel (with remote control operation only)/SPI level/System memory display/

Features marked \* are not provided on European models.

# Operating instructions



## ■ Basic operation

- Press the POWER key to ON.
  - The display lights and the unit becomes operative.
  - Pressing the key again switches the power OFF.
- Press one of the input selector keys to select the input source to be played.
  - If a System Control cord has been connected to the selected source component, it starts play automatically due the Automatic Play operation feature.
  - With the Automatic Play operation feature, when one of the source components is started to be played, the corresponding input selector is automatically switched for the source.
  - The selected input source is shown on the display.
- If automatic play operation using the System Control cords has not been set, start playing the source component selected.
- Adjust the output level with the MAIN VOLUME CONTROL keys.
- Adjust the balance of the left and right output levels with the BALANCE keys.
- Adjust the tone referring to the description in the "Graphic equalizer" section.

### Note:

When the TAPE-2 selector switch is set to ON, the input source selected with the input selector keys cannot be heard from the speakers. To listen to a source other than tape deck 2, be sure to set the TAPE-2 selector key to OFF.

## ■ To record an input source

- Select the source to be recorded with the input selector keys.
- Play the source.
- Set tape deck 1 and/or tape deck 2 to record mode.

### Note:

When a tape deck is connected to this unit with a System Control cord, all of the input selector keys are disabled during recording and do not function until recording is finished. This will prevent the recording from being interrupted.

## ■ Tape dubbing

Tape recordings may be duplicated (dubbed) easily using two tape decks connected to the TAPE 1 and 2 jacks.

For example:

(TAPE 1 to 2):

- Connect two tape decks to the TAPE 1 and TAPE 2 jacks.
- Press the TAPE 1 key.
- Play back the recorded tape and adjust the recording levels before starting tape dubbing.

(TAPE 2 to 1):

- Press the TAPE 2 key.
- Press a key other than TAPE 1 of the input selector keys such as AUX.
- Play back the recorded tape and adjust the recording levels before starting tape dubbing.
- Do not press the TAPE 1 key during recording with tape deck 1.

### Note:

Adjust recording levels on the deck that is making the copy using that deck's operating controls.

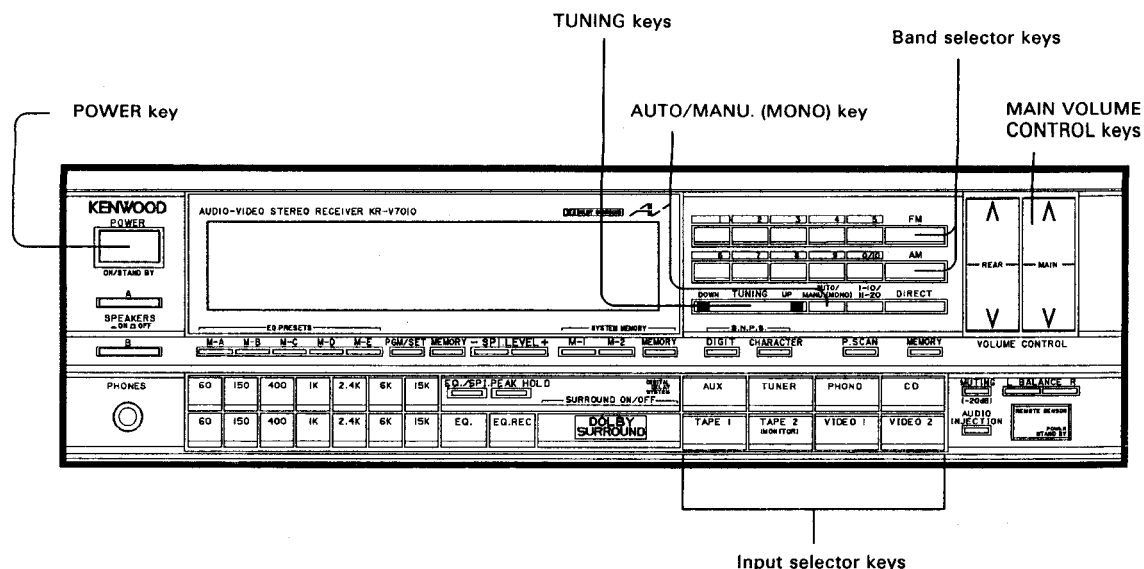
## POWER switch stand-by

A small amount of current is retained to support the memory and remote control sensor function when the POWER is switched OFF. This is known as the standby mode. POWER may be switched ON/OFF by the remote control unit.

The standby indicator on the front pane remains lit while the power plug of the receiver is connected to the AC outlet.

If this set is not used for a long time, the power cord should be disconnected from the AC outlet.

# Listening to broadcasts



## ■ To listen to radio broadcasts

1. Press the POWER key to ON.
2. Press the TUNER input selector key.
3. Press the AM or FM band selector key.
4. Tune in the desired broadcasting station according to the instructions in the "Tuning methods" section below.
- During tuning, sound is not heard because the muting circuit is activated. The sound will be heard suddenly as soon as a station is received, so be careful in setting the sound volume level.
5. When the desired station is received, adjust the volume with the MAIN VOLUME CONTROL keys.

## ■ Tuning methods

### Auto tuning

When the TUNING key is pressed, broadcast frequencies are scanned automatically in the upward or downward direction until a station is located and tuned in. The stereo/monaural FM reception mode is set automatically according to the station.

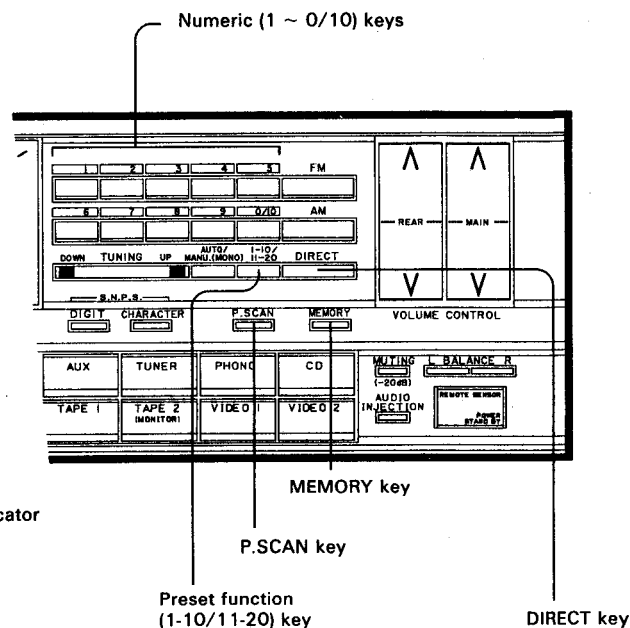
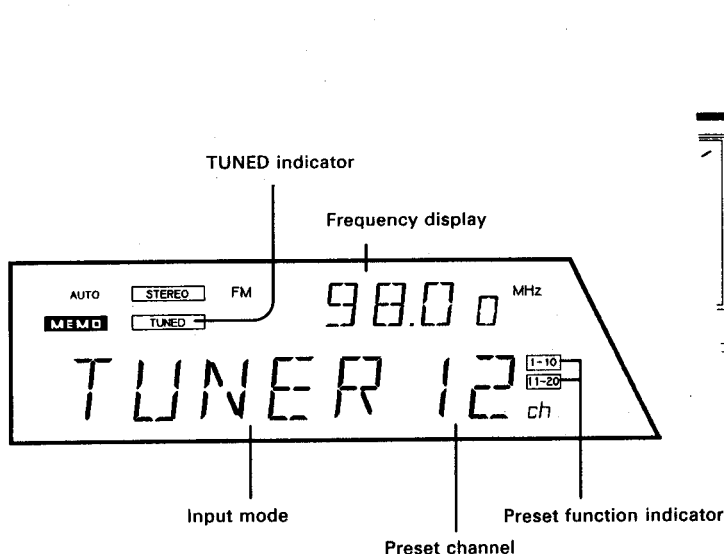
1. Press the AUTO/MANU. (MONO) key so that the AUTO indicator lights.
2. Press the UP or DOWN segment of the TUNING key.
  - Pressing the UP segment scans broadcast frequencies by varying the displayed frequencies in the upward direction, and pressing the DOWN segment scans by varying the frequencies in the downward direction.
  - When a broadcasting station is received, the frequency display freezes and indicates the frequency of the received station.
3. If the received station is not the desired station, press the same segment of the TUNING key again.
  - Repeat this until the desired station is received.

### Manual tuning

Stations with weak signal strength cannot be received by auto tuning. In such cases, tune in the desired station by manual tuning. The station will be received in monaural mode (monaural mode is resistant to noise).

1. Press the AUTO/MANU. (MONO) key so that the AUTO indicator is off.
2. Press the UP or DOWN segment of the TUNING key.
  - Every time the TUNING key is pressed, the displayed frequency varies by one step in the direction indicated by the pressed segment.
  - Holding the TUNING key depressed varies the displayed frequency continuously.
3. When the frequency of the desired station is tuned in, release the TUNING key.
  - Noise may be heard if the tuned frequency is not precisely the same as the frequency of the station. In such cases, press the UP or DOWN segment of the TUNING key to adjust the tuning precisely.





### Direct tuning

This method allows the desired frequency to be entered directly using the numeric keys, without using the TUNING key.

1. Press the DIRECT key.
2. Enter the frequency of the desired station with the numeric keys.
  - When all of the digits of the frequency have been entered, the station is automatically received.
  - If the entered frequency is not in the receivable frequency range, the frequency display blinks for 5 seconds, and the last station received is received again.

### Preset tuning

By storing the frequencies of broadcasting stations in the preset channels according to the instructions in the "To preset station frequencies" section, any of the preset stations can be received by one-touch operation.

1. Press the preset function key to select "1-10" or "11-20".
2. Press the numeric key corresponding to the preset channel of the desired station.
  - The display shows the frequency of that station, and the station is received.

### Preset Scan

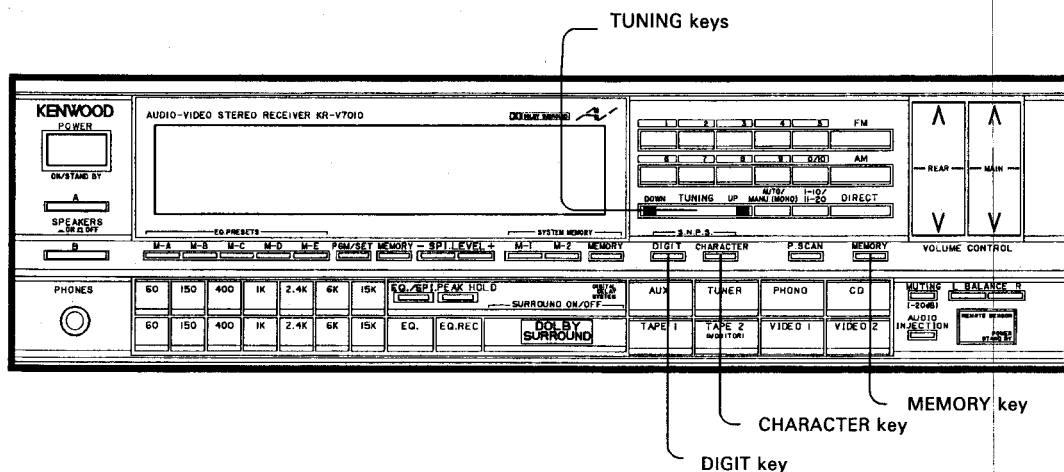
This function allows the preset stations stored in the preset channels to be received in sequence for 5 seconds each.

1. Press the P.SCAN key.
  - The frequency of each preset station is received for 5 seconds in sequence. A preset channel in which no station has been preset is skipped, and the scan operation moves to the next preset channel.
2. To stop Preset Scan, press the P.SCAN key again.
  - The preset station being received when the key is pressed is received continuously.

### To preset station frequencies

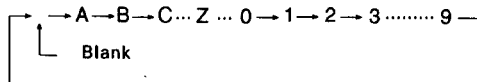
1. Press the band selector key for the desired band (FM or AM).
2. Tune in the desired station following the instructions in the "Tuning methods" section.
3. Press the preset function key to select the 1-10 or 11-20 preset channel range.
4. Press the MEMORY key.
  - The **MEMO** indicator on the display lights.
5. Within 5 seconds after pressing the MEMORY key, press the numeric key (1 to 0/10) corresponding to the preset channel in which the frequency is to be stored.
  - If a frequency has already been stored under the selected preset channel, the previously-stored frequency will be replaced by the new frequency.
6. Preset all desired frequencies by repeating steps 1 to 5 above.
  - When preset channels 1 to 10 have become full, press the preset function (1-10/11-20) key again to select the 11-20 range.

This unit allows both the frequencies and the names of broadcasting stations to be preset. When a station is recalled by preset tuning, the display shows both the frequency and the name of the station. (S.N.P.S.)

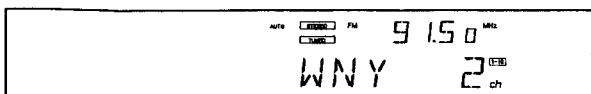
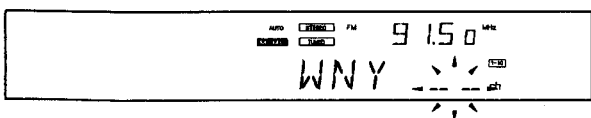
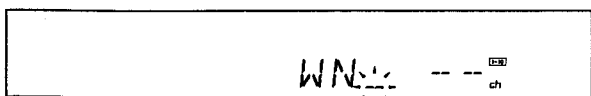
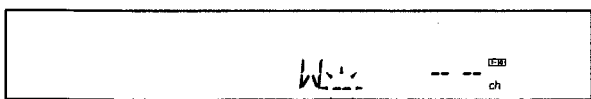
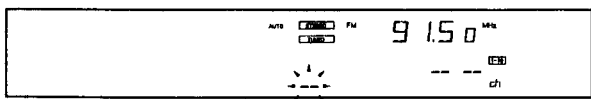


### Selection of display characters with the TUNING key

Every time the UP segment of the TUNING key is pressed, the displayed character is varied in the following order:



(Pressing the DOWN segment varies the displayed character in the reverse order.)

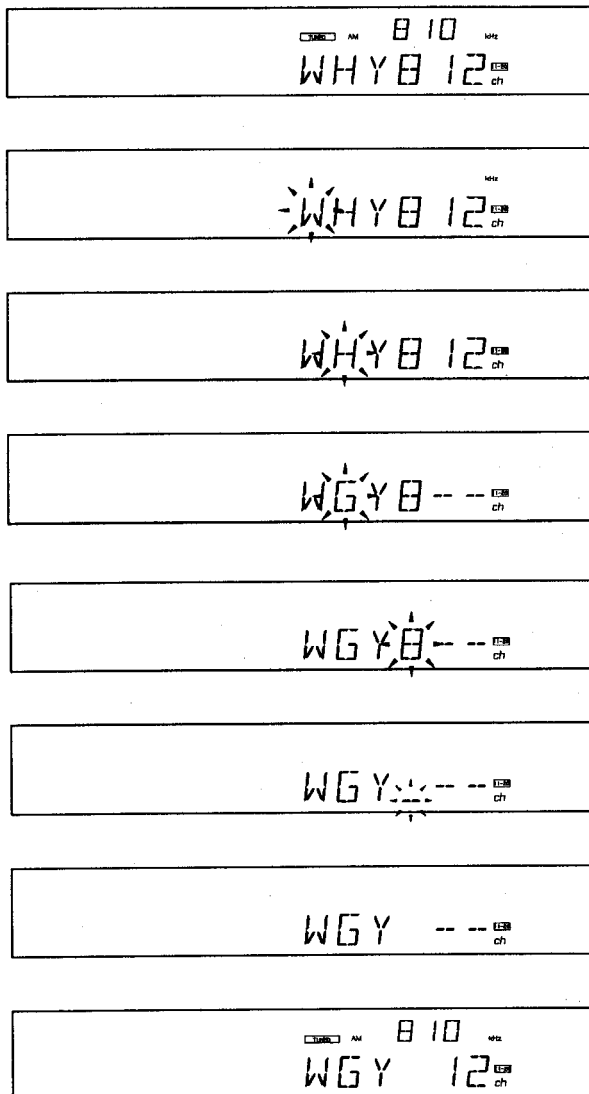
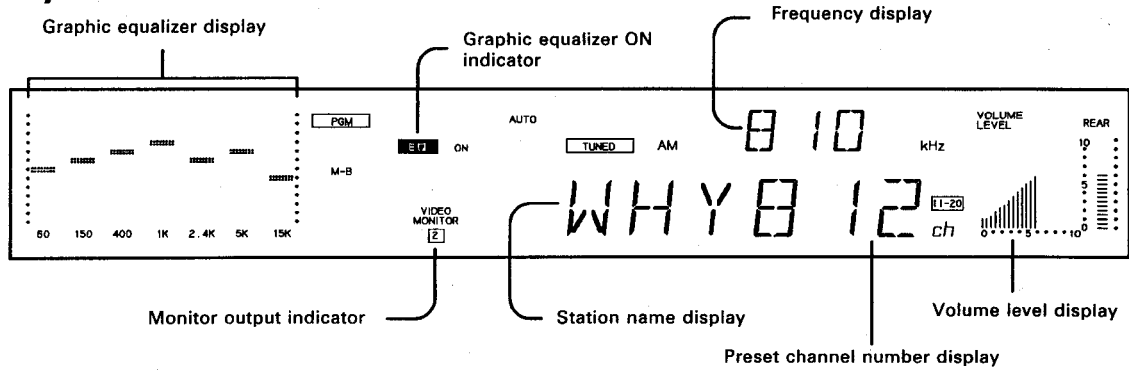


### ■ To preset station names and frequencies

Example 1: To preset the 91.50 MHz FM broadcast frequency and its station name "WNY" in preset channel 2.

1. Tune to 91.50 MHz FM.
2. Press the CHARACTER key.
3. Press the TUNING key to select "W".
4. Press the DIGIT key to set the character and move to the next location.
5. Press the TUNING key to select "N".
6. Press the DIGIT key.
7. Press the TUNING key to select "Y".
8. Since the fourth column should be left blank, press the DIGIT key twice or press the CHARACTER key.
9. Press the Memory key.
10. Press numeric key "2" to select preset channel 2.

## Display



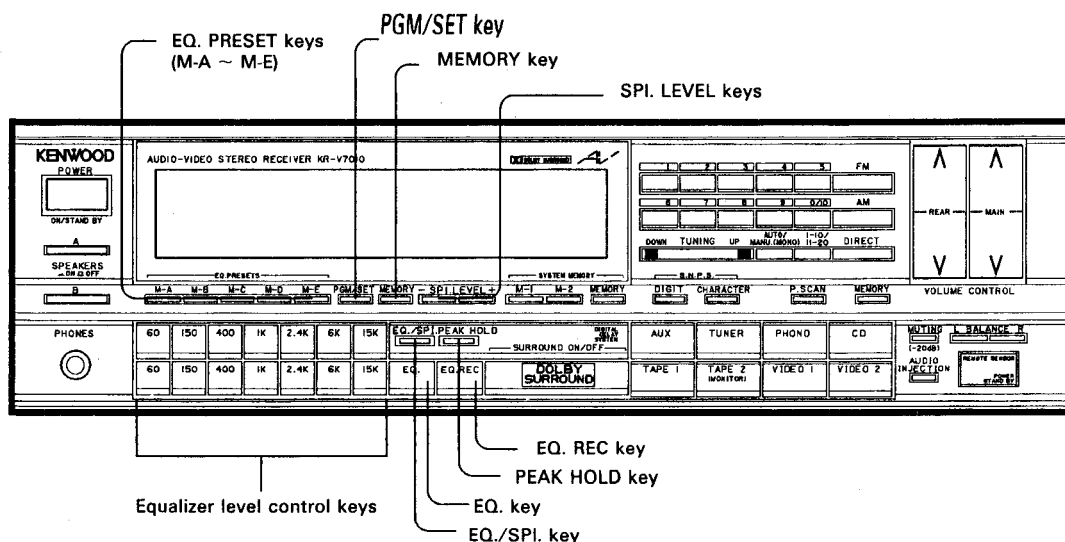
### ■ To change a preset station name

Example 2: To change the name of the 810 kHz AM broadcasting station stored in preset channel number 12 from "WHY8" to "WGY"

1. Recall preset channel number 12 with the preset function key and numeric key "2" according to the instructions in the "Preset tuning" section.
2. Press the CHARACTER key.
3. Press the DIGIT key to move to the first character location to be changed.
4. Press the TUNING key to select "G".
5. Press the DIGIT key twice.
6. Press the TUNING key to select a blank.
7. Press the DIGIT key or the CHARACTER key.
8. Press the MEMORY key.
9. Press numeric key "2" to select preset channel number 12.

# Graphic equalizer operation

This unit incorporates a high-performance 7-band stereo graphic equalizer. The graphic equalizer is equipped with memory for storing equalizer patterns created by the user, as well as for storing factory-preset patterns which can be recalled easily to provide equalizing effects suitable for various types of music.



## ■ To listen to music processed by the graphic equalizer

- Press the EQ key.
  - The EQ indicator lights.
- Press the seven sets of equalizer level control keys to set the desired equalizer level pattern.
  - Pressing each of the upper equalizer level keys increases the level of the corresponding band in +2 dB steps up to +12 dB.
  - Pressing each of the lower equalizer level keys decreases the level of the corresponding band in -2 dB steps down to -12 dB.
  - It is also possible to select a preset equalizer pattern by pressing one of the EQ.PRESET keys (M-A to M-E).
- To defeat the equalizer effect, press the EQ key again.
  - The DEFEAT indicator lights.

## ■ Equalizer recording

With this unit, sound processed by the graphic equalizer can be recorded through the TAPE-1 output.

- Press the EQ.REC key.
  - The EQ.REC indicator lights.
- Start recording on the TAPE 1 tape deck.
  - When the EQ.REC key is pressed again, the EQ.REC indicator goes off and normal (unprocessed) sound is output.

### Note:

Equalizer recording is not possible with the TAPE-2 output.

## ■ Preset equalizer memory and its applications

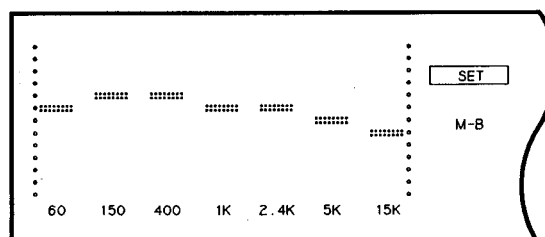
Five equalizer patterns are permanently preset in the memory of this unit for easy recalling at any time.

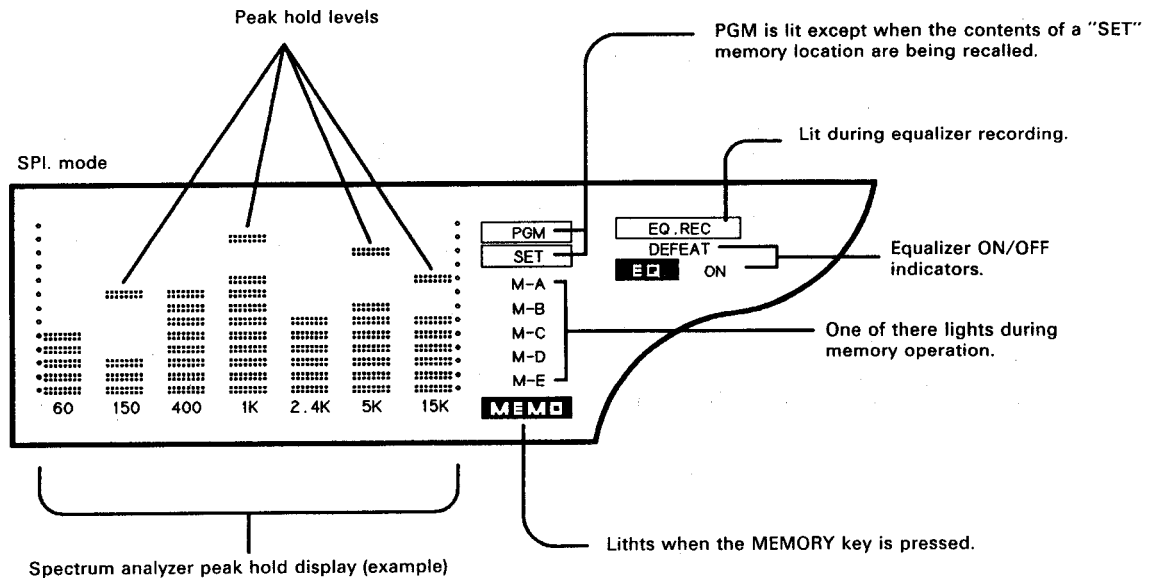
- Press the PGM/SET key to SET.
  - The SET indicator lights.
- Press one of the EQ.PRESET keys (M-A to M-E).
  - The indicator corresponding to the selected EQ.PRESET key lights.
  - The recalled equalizer pattern is displayed.

### Characteristics of the "SET" preset patterns

- A: For solid and punchy sound.
- B: For effective reproduction of dynamic movie sound.
- C: For easy-listening background music.
- D: For music sound reproduction with a live, "being-there" feeling.
- E: For realistically reproducing vocal music.

## Example of a graphic equalizer display





### ■ To store user-programmed equalizer patterns in memory

Up to five equalizer patterns created by the user can be stored in memory for recalling at any time.

1. Set the desired pattern with the equalizer level control keys.
2. Press the PGM/SET key to PGM.
  - The **PGM** indicator lights.
3. Press the MEMORY key. The **MEMO** indicator lights. Within 5 seconds after pressing the MEMORY key, press one of the EQ.PRESET keys M-A to M-E. The corresponding indicator on the display will light, and the pattern is stored at that memory location.

### ■ To recall user-programmed equalizer patterns from memory

1. Press the PGM/SET key to PGM.
  - The **PGM** indicator lights.
2. Press one of the EQ.PRESET keys M-A to M-E.
  - The corresponding indicator on the display lights.
  - The recalled equalizer pattern is displayed.

### ■ To switch the display contents

#### Spectrum analyzer display

1. Press the EQ./SPL. key to SPL.
2. Adjust the spectrum analyzer display level with the SPL. LEVEL keys.

The spectrum analyzer display shows the frequency level distribution of the signal being played. The spectrum analyzer display is useful to refer to when setting equalizer patterns.

#### PEAK HOLD key

When the PEAK HOLD key is pressed while the spectrum analyzer is displayed, the peak level of each frequency band is held temporarily, facilitating read-out of the peak values of the frequency bands.

#### Graphic equalizer display

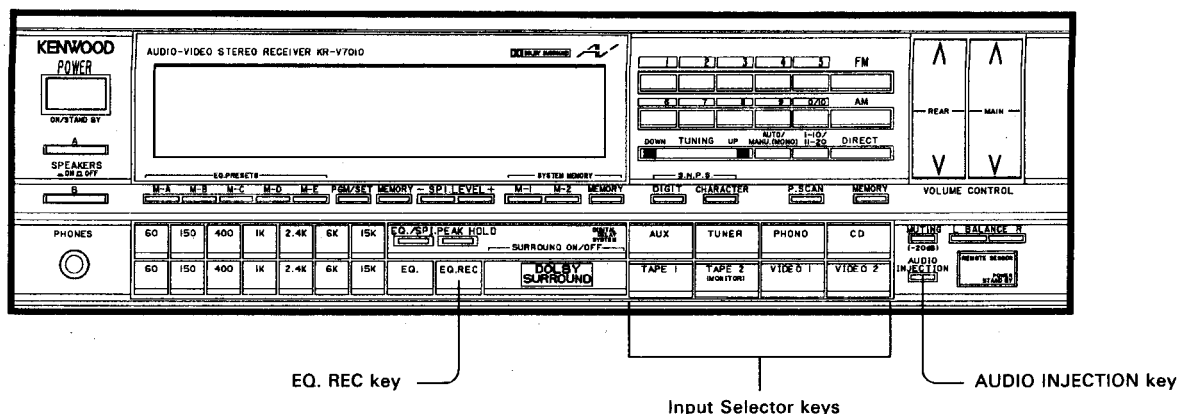
Press the EQ./SPL. key to EQ.

The frequencies are divided into seven frequency bands, and the level of each band can be set while observing the shape of the equalizer pattern.

- Even when the spectrum analyzer display is selected, the graphic equalizer is displayed for about 5 seconds in the following cases.

- ① When the POWER switch is set to ON.
  - ② When any of the equalizer level control keys is pressed.
  - ③ When the MEMORY key is pressed.
  - ④ When any of the M-A to M-E keys is pressed.
- After about 5 seconds, the spectrum analyzer display is resumed.

# Playing video sources



## ■ To play a video source

(For Surround playback, refer to "To play sound with the Surround effect" on page 23.)

1. Press the POWER key to ON.
2. Switch on the power of the monitor TV connected to the MONITOR OUT jack.
3. Select the playback source with the input selector keys.
4. Play the video component.
5. The video is reproduced on the monitor TV, and the audio is reproduced through the speakers.

## ■ Dubbing between two VCRs

Video dubbing can be performed while listening to any desired source.

With this receiver, through dubbing from **VCR 2** to **VCR 1** is possible.

To operate, set the **VCR 1** video deck to record-pause mode and set the **VCR 2** video deck to playback mode. When the **VCR 2** video deck starts to play, the record-pause mode of the **VCR 1** video deck is simultaneously released and recording starts.

## ■ Audio injection

During video dubbing, the sound from the VCR can be replaced with sound from any desired audio source without affecting the picture.

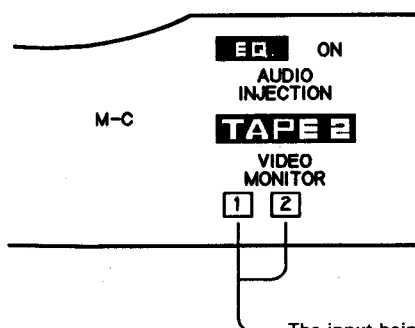
In addition, the graphic equalizer effect can be applied to the recorded audio source.

1. Press the AUDIO INJECTION key so that the "AUDIO INJECTION" display is illuminated.
2. Select the desired audio source for Audio injection with the input selector keys.
3. When equalizer compensation is required when recording a desired audio source with audio injection ON, press the EQ. REC key.
  - The **EQ. REC** indicator lights up.
  - Set the equalizer controls as desired.
4. Operate each VCR for dubbing.

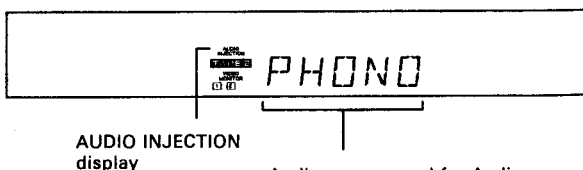
### Signal at the MONITOR OUT jack

The MONITOR OUT jack provides the video signal input to the VIDEO-1 or VIDEO-2 jack. When a video source is being played, the display is as shown below.

#### Display



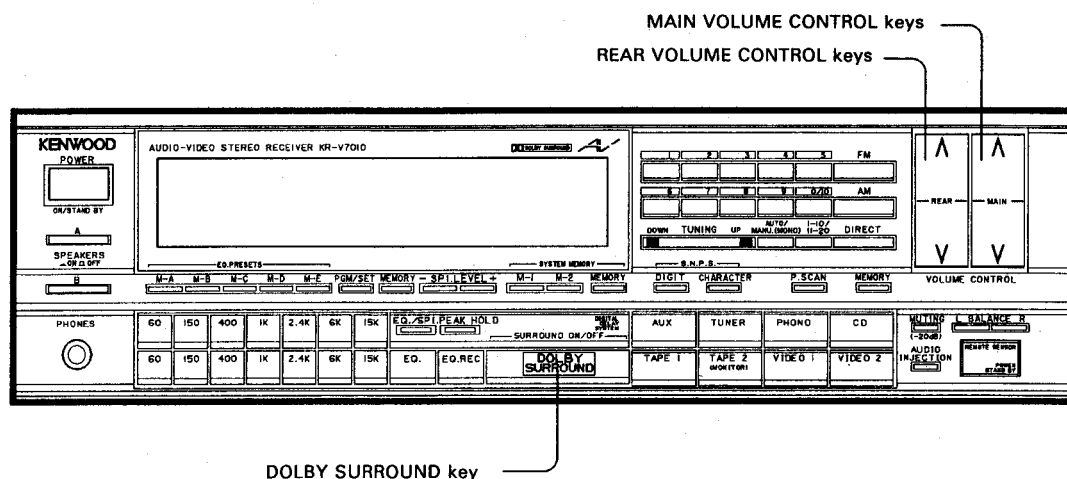
The input being displayed is available at the MONITOR OUT jack.



AUDIO INJECTION display

Audio source used for Audio injection (when TAPE 2 is selected, the TAPE 2 source has priority over other sources).

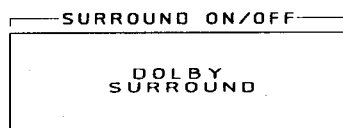
# Surround effect (Except for Europe).



## ■ To play sound with the Surround effect

### DOLBY SURROUND

1. Set the SURROUND key to ON.
- The DOLBY SURROUND indicator on the key lights.
- The input selector indicator on the display window shows "DOLBY" for about 5 seconds.

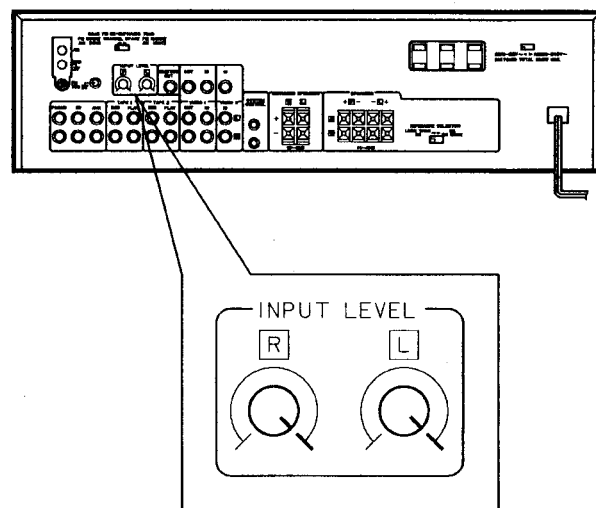


2. Select the source to be played with the Dolby-surround sound effect, and play it.
3. Adjust the volume level and balance between the front speakers and the rear speakers by controlling the REAR VOLUME control keys.
- The MAIN VOLUME control allows you to increase or decrease the volume level for both the front and rear channels simultaneously.
- The REAR VOLUME control range is  $\pm 20$  dB of the front speaker level.

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## ■ To adjust the input level


### Rear panel



The INPUT LEVEL controls located on the rear panel normally set to their maximum position. However, if the left/right balance is shifted incorrectly, first set the DOLBY SURROUND key to ON, select and play a monaural source and adjust the controls so that no sound is heard from the rear speakers.

## Surround effect (Except for Europe)

### ■ Note on the Surround mode

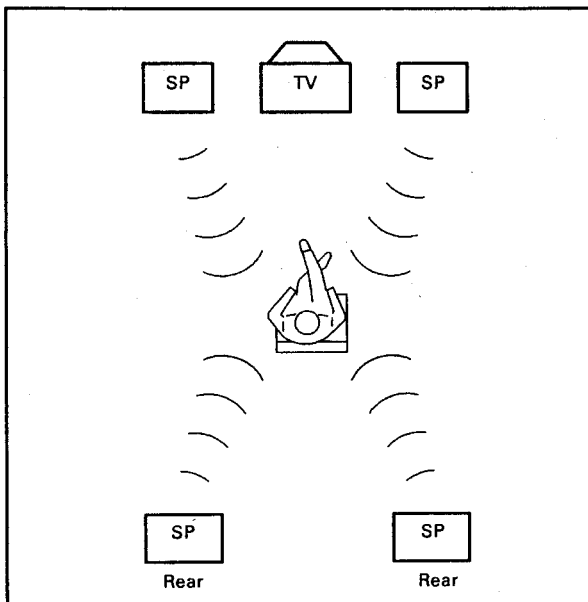
The reason why the sound you experience in concert halls or stadiums is so real and live is that the sound reaching your ears comes not only from the front but also from the surroundings. To reproduce sound with an effect as close as possible to a "live" atmosphere, this unit is provided with the Dolby  SURROUND mode.

### ■ Arranging the speakers


A variety of rear speaker arrangement patterns are possible according to room size, layout, reverberation characteristics, and other factors.

The arrangement patterns given here are typical examples for providing an effective Surround atmosphere. These examples are only suggestions. Arrange the speakers according to your individual taste.

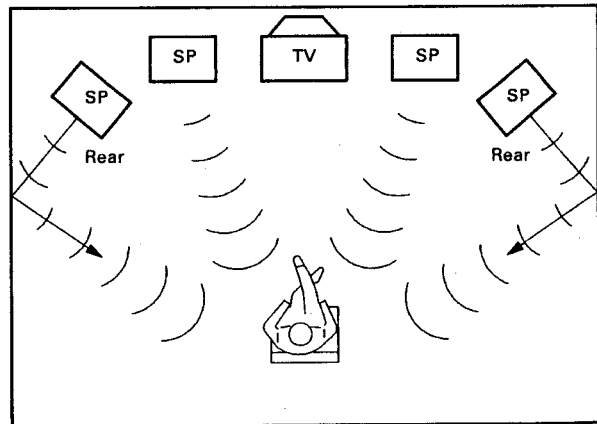
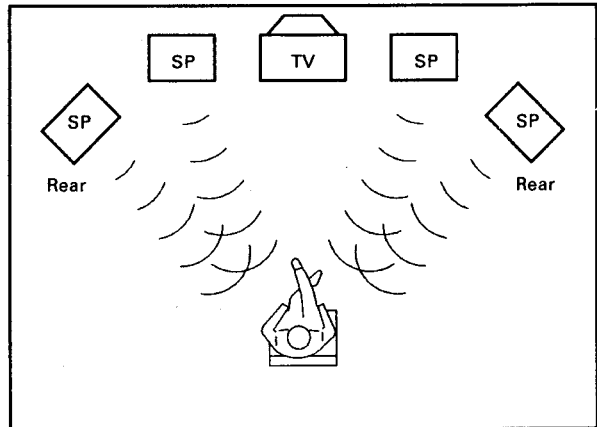
#### Standard arrangement



### Dolby Surround mode

Video tapes marked with the  symbol are encoded with Dolby Surround information. This unit incorporates a Dolby Surround decoder for playing such video tapes with a sound effect similar to that experienced in movie theaters.

#### Arranging four speakers in front



If the left and right walls are made of a hard material such as concrete, facing the rear (Surround) speakers towards the walls may give better effect.



# System memory

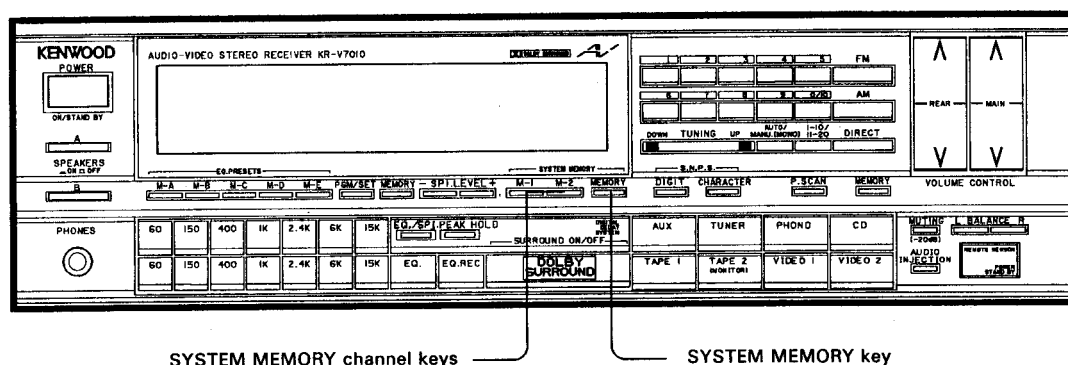
The required playback condition can be stored in memory for each music source (tape, compact disc, phonograph record (disc), or broadcasting program), so that the same volume level, the same balance (between front and rear channels), and the same equalizer pattern, etc. can be recalled at any time instantly.

Two types of settings can be stored in memory, and by pressing the appropriate SYSTEM MEMORY (M-1 or M-2) key you can recall the preset sound field condition instantly.

## Stored contents:

The stored contents in the System Memory are as follows:

- Input source (CD, PHONO, TUNER, TAPE, VIDEO, etc.) (including TAPE 2)
- Preset channel in the TUNER position
- Audio injection
- EQ. key setting (ON/DEFEAT)
- EQ. REC key setting (ON/OFF)
- Preset channel of the equalizer pattern
- SURROUND setting (ON/OFF)
- Main volume level
- Rear volume level
- Balance control setting
- Video monitor out



## System Memory example

M-1: Input-TUNER, Tuner preset channel-3ch, Audio injection-off, EQ.-ON, EQ.REC-OFF, EQ. preset channel-M-A (PGM or SET), Surround-ON, Main volume level Rear volume level, Balance control setting, Video monitor out-1

## How to preset the System Memory

1. Set the playback conditions as desired.
    - When selecting the tuner or equalizer, be sure to designate the preset channel.
  2. Press the SYSTEM MEMORY key.
    - The display shows "SYS M-" for about 5 seconds.
    - If "SYS M" is blinking in the display, the tuner frequency or equalizer pattern is not preset in memory.
- After presetting the playback condition for each channel, press the MEMORY key again.

### Notes:

1. Do not set the volume controls to an excessively high volume level. It may not only astonish the listener; but it may also damage the speakers or amplifier.
2. If the contents of a preset channel is changed after being designated as the tuner or equalizer section channel for System Memory, the contents of the System Memory channel will also be changed.

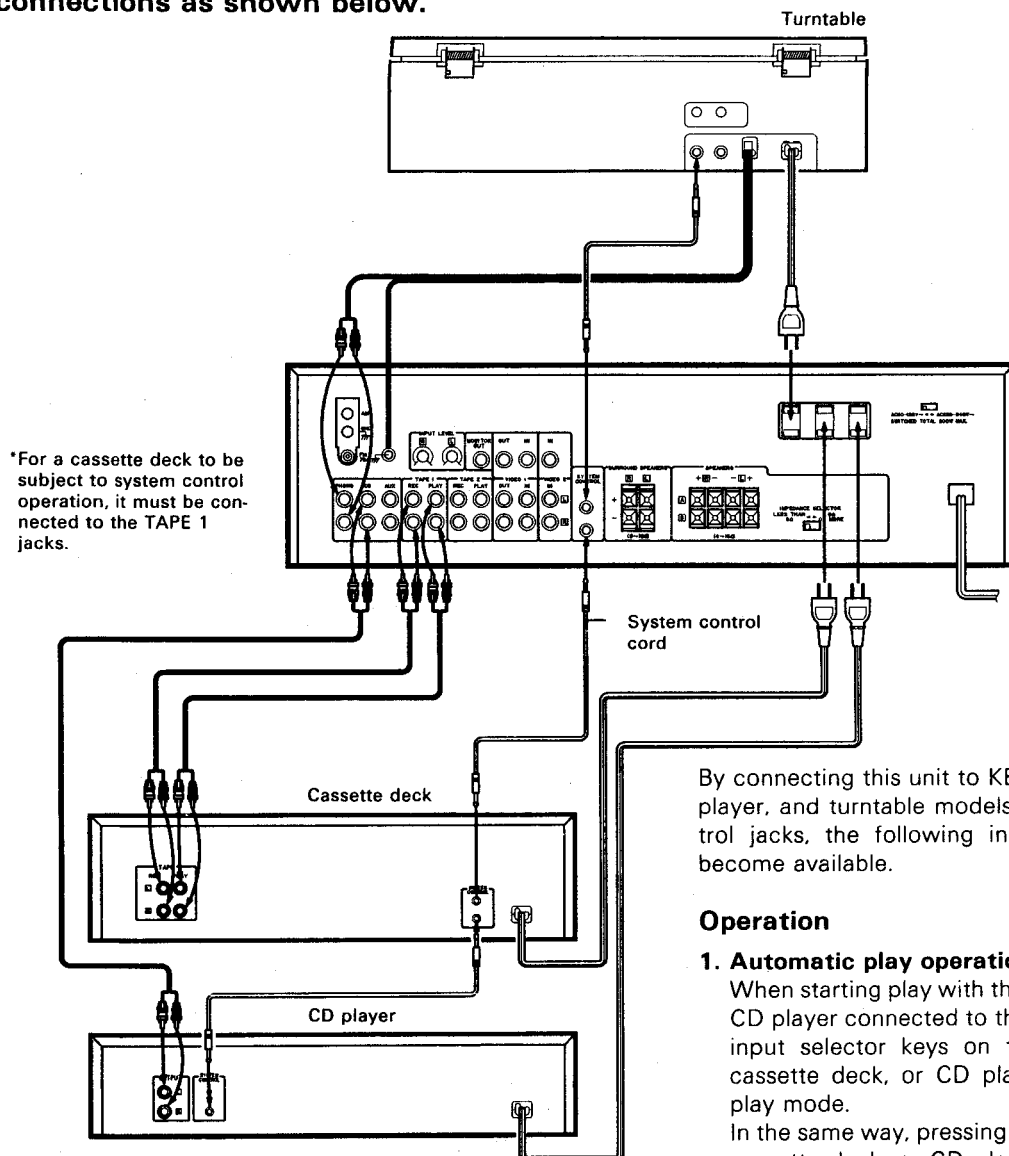
## How to recall System Memory

1. Press the M-1 or M-2 key.
  - The display shows "SYS M-1" or "SYS M-2" for about 1 second, and the settings of each section are changed to the preset contents.
2. Readjust the setting of each section as required.
  - When PHONO is selected as the input source, with a system-controlled turntable connected, the turntable will automatically start playing by recalling the System Memory. Therefore, be sure to set a record on the platter of the turntable before activating the System Memory function.
  - In the same way, when a system-controlled tape deck or CD player is connected to this unit, the tape deck or CD player can be started automatically by activating the System Memory function.

# System control operation

## Connection

Using the system control cords provided with KENWOOD system component models, make connections as shown below.



By connecting this unit to KENWOOD cassette deck, CD player, and turntable models equipped with system control jacks, the following integrated operation features become available.

## Operation

### 1. Automatic play operation

When starting play with the turntable, cassette deck, or CD player connected to the receiver, press the desired input selector keys on the receiver. The turntable, cassette deck, or CD player will automatically enter play mode.

In the same way, pressing the Play key of the turntable, cassette deck, or CD player will automatically switch the input selector on the receiver to the component on which the Play key is pressed.

### 2. Synchro recording

To record the sound from the CD player or turntable onto a tape with the cassette deck, press the CD or PHONO of the input selector keys and load a CD or record. Set the cassette deck to rec pause mode, then press the PLAY (START) key of the CD player or turntable. The cassette deck will start recording automatically, synchronized with the CD player or turntable starting play.

### 3. Remote control

The remote control unit provided with this unit, to which a KENWOOD system turntable, cassette deck, or CD player is connected, is equipped with related control keys. The related components can be controlled using these keys.

#### Note:

During recording with a cassette deck, the input selector on the receiver is fixed at the source from which the recording is made, by the system control circuit. At this time, pressing any of the input selector keys has no effect.

## ■ Connection of the audio cords and system control cord

Make sure that the audio cords are connected correctly right and left as in the figure.

If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate. (For connections of the audio cords, refer to the "System connections" diagram.)



# Remote control RC-80/RC-80E

## ■ Operations

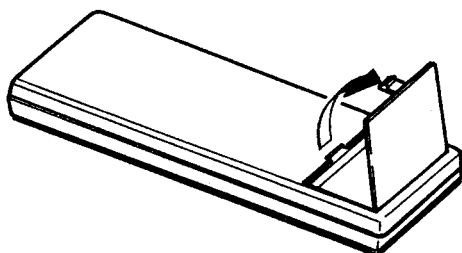
1. Connect the power plug of the receiver to an AC outlet.
  - The receiver enters the power standby mode and the POWER STANDBY indicator lights.
2. Press the POWER key of the remote control unit or the POWER key of the receiver.
  - The receiver enters the power ON mode.
3. The various functions of the receiver can be operated with the keys of the remote control unit.

### Note for remote control operation

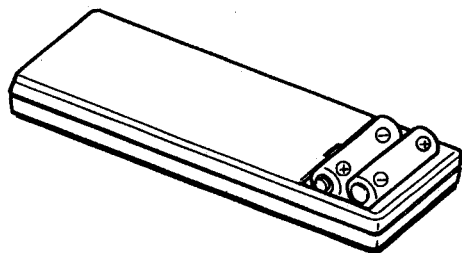
After pressing one of the operation keys, when the next operation is required, press the next operation key firmly after an approx. 1 second interval.  
If the next operation key is pressed immediately after the previous key, misoperation may result.

## ■ Installing the batteries in the remote control unit

1. Remove the battery compartment cover.



2. Insert two size "AA" (R6) batteries confirming the correct polarity and close the cover in its place.



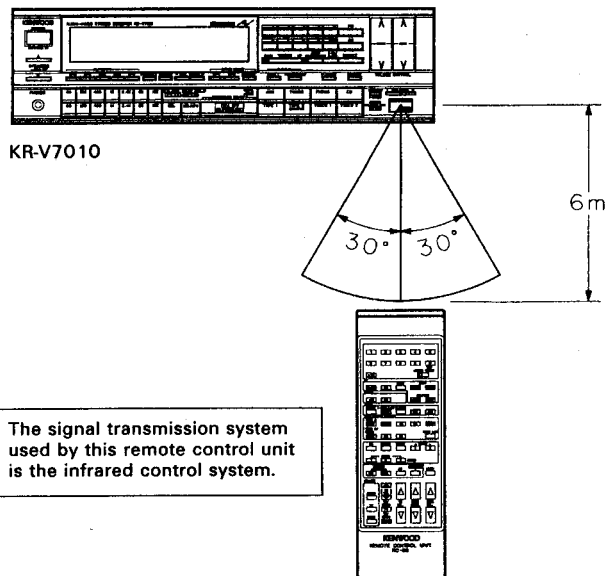
### Note:

The provided batteries are to be used for checking the operation of the remote control unit, and they may have a short life. When the remote unit becomes effective only for short distances or does not operate properly, replace the batteries with two new batteries.

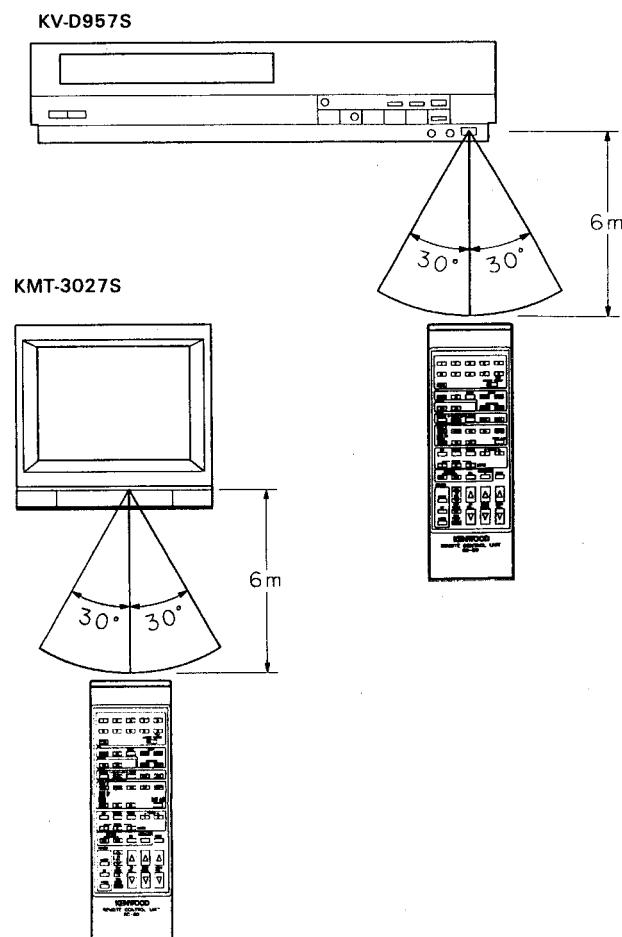
## ■ Operating range of the remote control unit

The operating range of the remote control unit may differ according to temperature, humidity, or using conditions, however, it is defined approximately as shown in the figure below:

### For controlling audio

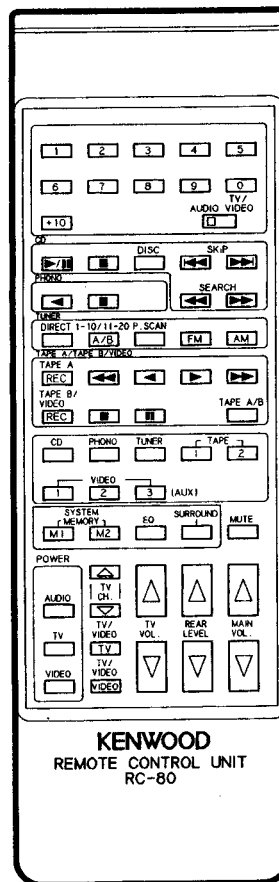


### For controlling TV and VIDEO sets (U.S.A. and military models)



## Remote control unit (U.S.A and military models)

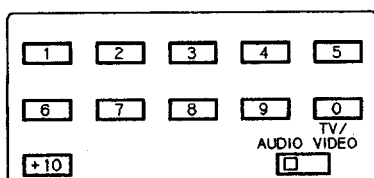
### RC-80



If any of the following KENWOOD component models is used, this remote control unit cannot be used to control the CD manual search function or to make entries with the numeric keys (1 to 0 and +10):

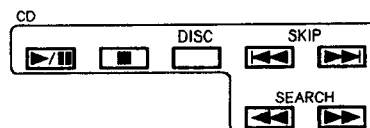
DP-M97, DP-37, DP-47

### ■ Numeric keys (1 to 0, +10)



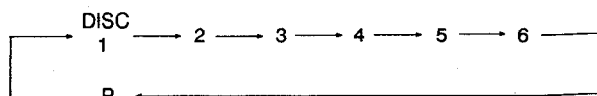
- When the CD or TUNER input selector key is selected, these keys can be used in place of the numeric keys on the CD player or receiver, respectively.
  - The AUDIO-TV/VIDEO switch on the RC-80 must be set to AUDIO.
  - The +10 key is used exclusively with the CD player.
- When the AUDIO-TV/VIDEO switch is set to TV/VIDEO, the numeric keys can be used in place of the TV channel select keys.

### ■ CD player control keys



These keys allow the same operations as the keys with the same names on the CD player.

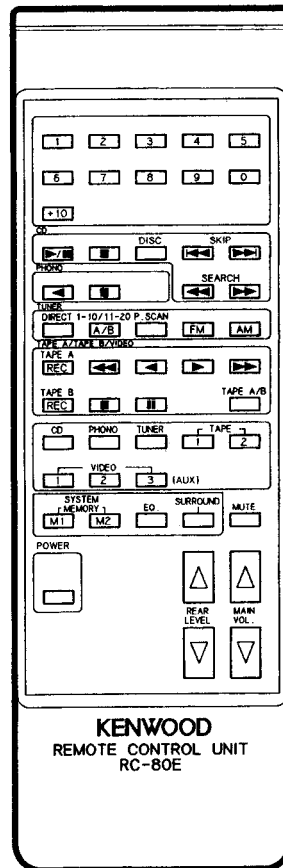
The DISC key is for use exclusively with a multiple CD player. Pressing the DISC key allows one of DISC 1 to DISC 6 to be selected in the following cycle.



(DP-M6010 only)

## Remote control unit (Canada and Europe models)

### RC-80E

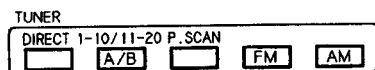


#### ■ Turntable (PHONO) control keys



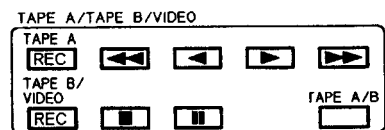
The Play (◀) and Stop (■) keys are provided.

#### ■ TUNER control keys



These keys allow the same operations as the keys with the same names on the receiver.

#### ■ TAPE deck control keys



Except for the REC keys, the object of the tape deck control keys is alternated between the TAPE A and TAPE B decks every time the TAPE A/B key is pressed.

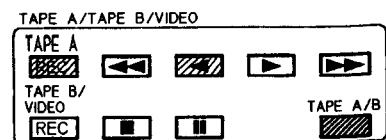
The REC keys operate as specialized keys for TAPE A and TAPE B (TAPE B/VIDEO).


#### Note:

When it is necessary to press the fast forward key after the rewind key, be sure to press the stop key before pressing the fast forward key.

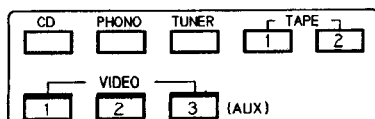
#### ■ VIDEO deck control keys (RC-80)

When the AUDIO-TV/VIDEO switch is set to TV/VIDEO:



The tape deck control keys except those marked  can be used as the VIDEO deck control keys.

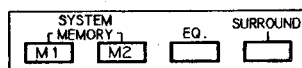
## Input selector keys



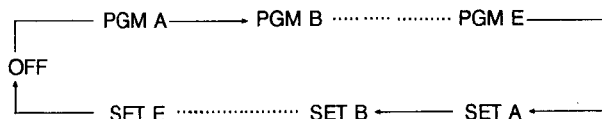
These keys have the same functions as the input selector keys on the receiver.

- The VIDEO 3 key corresponds to the AUX input of the receiver.

## Equalizer/Surround/System memory keys

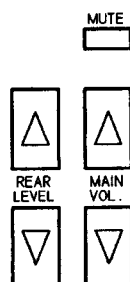


Every time the EQ key is pressed, the equalizer of this unit can be switched ON/DEFEAT or ten preset equalizer patterns can be changed over in the following cycle.



The SYSTEM MEMORY and SURROUND keys have the same functions as the keys with the same name on the front panel of the receiver.  
(Remember that the SURROUND key is not used with the Europe model.)

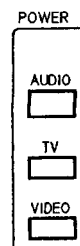
## Volume level keys



These keys allow the same operations as the keys with the same names on the receiver.  
(The REAR LEVEL key is not used with the Europe model.)

## POWER keys

[RC-80]



### AUDIO key:

Switches the power of the receiver to ON/STAND-BY (OFF).

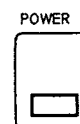
### TV key:

Switches the power of the TV set to ON/STAND-BY (OFF).

### VIDEO key:

Switches the power of the video deck to On/STAND-BY (OFF).

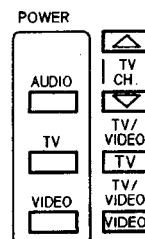
[RC-80E]



### POWER key:

Switches the power of the receiver to ON/STAND-BY (OFF).

## TV/VIDEO control keys (RC-80 only)



### TV VOL keys:

Pressing the key increases the volume of the TV set, and pressing the key decreases it.

### TV CH keys:

Pressing the key shifts the channel tuned on the TV set upward, and pressing the key shifts it downward.

### TV/VIDEO TV key:

Every time this key is pressed, the input to the TV set is switched between the TV signal and the external video signal.

### TV/VIDEO VIDEO key:

Every time this key is pressed, the output from the video deck is switched between the TV channel RF output and video output.

# In case of difficulty

If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Symptom	Cause	Remedy
No power, no sound.	1. Power cord not plugged in. 2. Poor connection at wall outlet. Power outlet inactive.	1. Check plug contact. 2. Check outlet using a lamp or other appliance (outlet may be controlled by a wall switch).
No sound from left and right.	1. Speaker cords disconnected. 2. Speakers switched off.	1. Check speaker connections. 2. Check speaker switch.
Sound from left or right, but not both.	1. Poor speaker connections. 2. Defective speaker.	1. Check connections at both ends of speaker cord. 2. Reverse speakers. If problem stays with speaker, have speaker checked.
FM broadcast too noisy. Sufficient reception is impossible.	1. Indoor antenna is used. 2. Poor connection of the antenna cable.	1. Use an outdoor antenna. 2. Connect the antenna cable correctly.
Dubbing from TAPE 2 to TAPE 1 is impossible.	The Input Selector TAPE 1 button is pressed. (The TAPE 1 indicator lights in the display.)	Switch the input selector to a source other than TAPE 1.
Graphic equalizer recording is impossible in the VIDEO DUBBING mode.	The AUDIO INJECTION key is not pressed ON.	Press the AUDIO INJECTION key to ON. Check that the AUDIO INJECTION indicator lights up, then press the EQ REC key.
No sound is heard with both of the SPEAKERS A and B switches set to ON.	A pair of speakers is not connected to one of the A or B speaker terminals.	Connect two pairs of speakers correctly to both A and B speaker terminals. Or, switch the Speaker Selector to the A or B position to which the speakers are connected.
No sound from the rear speakers.	1. Surround switch is set to OFF. 2. When the volume of the front speakers is set at a low level, the volume level of the rear speakers is set at a lower level. 3. Monaural source is used.	1. Press the Surround key ON. 2. Adjust the volume level of the rear speakers to a higher position. 3. Change the playback source to a stereo or surround source.
Remote control does not function.	1. Batteries are not loaded. Or batteries are exhausted. 2. The remote sensor is obstructed.	1. Replace the batteries with new ones. 2. Remove the obstacle from in front of the remote sensor.
Occurs during AM reception only	Cause	Remedy
High-frequency whistle especially at night.	Interference from TV set.	Turn off TV set. If problem disappears, try relocating TV set.
Intermittent buzz or cracking sound.	Lightning. Fluorescent lamps starting. Appliance or furnace starting.	No remedy. Try reversing AC plug. Try reversing AC plug.
Occurs during FM reception only	Cause	Remedy
Hiss that gets worse in stereo reception.	Very weak antenna input signal.	Consider an outdoor antenna installation. In areas remote from the transmitter, a 5 to 8 element antenna designed exclusively for FM is suggested.
Rhythmic static or popping noises.	Automobile ignition noise, especially evident when receiving weak signals.	Review antenna installation. Site the antenna as far from the street as possible and use coaxial cable.
STEREO indicator fails to light during stereo broadcast.	Another possible effect of a very weak signal.	Antenna system needs attention (see above).

# Notes on operation

## Speaker protection circuitry

If the speaker cords are short-circuited, the speaker protection circuitry is activated and the sound is muted. If this occurs, switch the POWER key to OFF, remove the short-circuit from the speaker cords, and switch the POWER key to ON again. Normal operation will resume.

## Specifications

### AUDIO SECTION

Rated Power Output (Except for Europe)

80 watts per channel minimum RMS, both channel driven at 8 ohms, from 20 Hz to 20,000 Hz with no more than 0.008% total harmonic distortion. (FTC)

(Rear) (Except for Europe)

10 watts per channel minimum RMS, both channel driven at 8 ohms at 1 kHz with no more than 0.9% total harmonic distortion.

Maximum continuous output power (For Europe)

(IEC) from 63 Hz to 12,500 Hz

0.7% T.H.D. at 8 ohms ..... 95 W + 95 W

(DIN) 1,000 Hz at 4 ohms ..... 80 W + 80 W

Total Harmonic Distortion

(1 kHz, 8 ohms) ..... 0.002%

Input Sensitivity/Impedance

PHONO (MM) ..... 2.5 mV/47 kohms

CD, AUX, TAPE, VIDEO ..... 200 mV/47 kohms

Frequency Response

CD, AUX, TAPE, VIDEO ..... 10 Hz – 100 kHz +0 dB  
-3 dB

Signal-to-Noise Ratio (IHF-A)

PHONO (MM) ..... 73 dB

CD, AUX, TAPE, VIDEO ..... 100 dB

Graphic Equalizer

Center Frequencies ..... 60 Hz, 150 Hz, 400 Hz, 1 kHz,  
2.4 kHz, 6 kHz, 15 kHz

Control Range .....  $\pm 12$  dB

### VIDEO SECTION

Inputs/Outputs VIDEO ..... 1 Vp-p, 75 ohms unbalanced

### FM TUNER SECTION

Tuning Frequency Range ..... 87.5 MHz – 108 MHz

Antenna Impedance ..... 75 ohms unbalanced

Sensitivity ..... IHF ..... 10.8 dBf (0.95  $\mu$ V at 75 ohms)

DIN (MONO) ..... 1.1  $\mu$ V

(STEREO) ..... 40  $\mu$ V

Signal-to-Noise Ratio at 65 dBf (IHF)

MONO ..... 78 dB

STEREO ..... 72 dB

Total Harmonic Distortion at 1,000 Hz

MONO ..... 0.2%

STEREO ..... 0.3%

Frequency Response ..... 30 Hz – 15 kHz +0.5 dB  
-2.5 dB

Stereo Separation ..... 40 dB at 1 kHz

### AM TUNER SECTION

Tuning Frequency Range

530 kHz – 1,610 kHz

(with the AM tuning interval set at 10 kHz)

531 kHz – 1,602 kHz

(with the AM tuning interval set at 9 kHz)

Usable Sensitivity ..... 10  $\mu$ V/(400  $\mu$ V/m)

Signal-to-Noise Ratio ..... 50 dB

Total Harmonic Distortion ..... 0.3%

Selectivity ..... 25 dB

### GENERAL

Power Consumption ..... 3.2A...USA Model/200 W...Others

Dimensions ..... 440 (W)  $\times$  134 (H)  $\times$  322 (D) mm  
(17-5/16")  $\times$  (5-1/4")  $\times$  (12-11/16")

Weight (Net) ..... 8.2 kg (18.1 lb)

**Note:** KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.